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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,296	07/30/2001	Dong Su Lee	83371	9882

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EXAMINER

SHEEHAN, JOHN P

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,296

Applicant(s)

LEE ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. This application contains claim 6 drawn to an invention nonelected with traverse in Paper No. 6. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112, 1st Paragraph

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. Claims 8 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
 - I. In claim 8, the limitation the recited ratio "more than 1000 to 1" does not find support in the specification as filed and therefore is considered drawn to new matter.

II. There is no disclosure in the application as filed to support the preannealed film having "a ratio of thickness to an average grain size of the metallic film of over 50 to 1".

Claim Rejections - 35 USC § 112, 2nd Paragraph

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7 to 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In line 2 of each of claims 7 to 9 it is not clear what "thickness" is being referred to in the recited ratio. The "thickness" of what?

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

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2. Claims 1 to 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Summerfelt (US Patent No. 6,117,689).

Summerfelt teaches a method comprising depositing a metallic film on a substrate (column 8, lines 53 to 57 and column 9, lines 32 to 38) and subsequently annealing the substrate and film to cause grain growth (column 10, lines 14 to 28). Summerfelt discloses that the gas atmosphere used during the film deposition includes a mixture of argon and oxygen (column 8, lines 55 to 57 and column 9, line 32) which is encompassed by the instant claim language, "an atmosphere of an inert gas and a specified additive gas" (claim 1, lines 3 and 4) and the gases recited in claim 4. Summerfelt also teaches Pt as a specific example of the metallic film (column 9, line 32) but also teaches the use of Ru, Pd, Ir, Au and Ag (column 11, lines 20 to 25) all of which are encompassed by the term "metallic" (claim 1, line 1) and the metallic films recited in claim 5. As an example of a method of depositing the metallic film Summerfelt teaches DC sputtering (column 9, line 32) which is encompassed by term "depositing" (claim 1, line 3) and the DC sputtering recited in claim 3. The claimed process does not distinguish Summerfelt.

Response to Arguments

3. Applicant's arguments filed August 9, 2003 have been fully considered but they are not persuasive.

Applicants argue that Summerfelt teaches that there are intermediate layers between the substrate and the metallic film and that Summerfelt teaches depositing

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films above the metallic film in question whereas applicants' claim recite depositing the metallic film "directly on the substrate". The Examiner is not persuaded. A substrate is defined in The American College Dictionary (copy attached to this Office Action) as a "substratum" which in turn is defined as;

1. that which is spread or laid under something else; a stratum or layer lying under another.
2. something which underlies, or serves as a basis or foundation.

There is nothing in this dictionary definition of substrate that precludes the additional layers taught by Summerfelt. Further, although applicants have not explicitly argued it, applicants appear to be implying that the use of the term "consisting essentially of" in the instant claims preclude subsequent layers taught by Summerfelt. This is not persuasive. The transitional phrase, "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s) of the claimed invention." When an applicant contends that additional materials taught by the prior art are excluded by the use of the transitional phrase, "consisting essentially of," "applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention", MPEP 2111.03. Applicants have not shown that the presence of additional layers as taught by Summerfelt does "materially affect the basic and novel characteristic(s) of the claimed invention. In view of this, applicants' claims do not preclude additional layering steps taught by Summerfelt.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

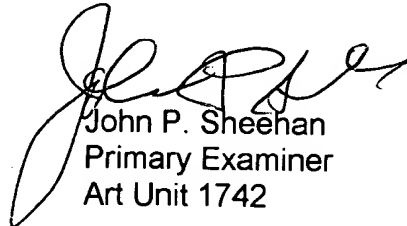
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



John P. Sheehan
Primary Examiner
Art Unit 1742

jps
August 17, 2003